

Claims:

What is claimed is:

1. A blower type chemical diffusing apparatus having an apparatus casing body, an air blower, a chemical cartridge and a battery, characterized in that

said apparatus casing body comprises a first side and a second side counterpart casing body openably coupled together by a hinge, said first side casing body having a blower mounting recess, an airflow section and a battery accepting recess, said second side casing body having an airflow section spaced from the airflow section in said first side casing body;

said air blower has a fan adapted for rotation by a motor, said fan and said motor being mounted in said blower mounting recess;

said chemical cartridge is disposed between the air blower in said first side casing body and the airflow section in said second side casing body;

said battery is removably accepted in said battery accommodating recess;

said blower mounting and battery accommodating recesses are spaced apart from each other in a planar direction and positioned not to overlap in a direction of their thicknesses; and

said chemical cartridge contains a chemical impregnated body having a carrier in the form of a sheet impregnated with a chemical.

2. A blower type chemical diffusing apparatus as set forth in claim 1 wherein said apparatus casing body has a hook engagement section to which a hook of a hanging aid can be engaged and a hole in which a fitting section of said hanging aid can be fitted.

3. A blower type insect pest control apparatus including:

an apparatus casing body having an air inlet port and a first and a second air discharge port, and

a chemical receptacle, a fan and a motor in the apparatus casing body, the chemical receptacle retaining a chemical impreg-

nated body impregnated with an insect pest control component,

whereby rotating the fan by the motor allows air to be drawn through the air inlet port and air drawn to strike on the chemical impregnated body in the chemical receptacle and air entraining insect pest control component therein from the chemical impregnated body to emanate and diffuse into an environmental atmosphere, characterized in that:

said first and second air discharge ports are each in the form of a hole having a radial length and inclined to a circumferential direction in which said fan rotates whereby when the apparatus is used with the apparatus casing body worn on a user, air is discharged upwards through said first air discharge port and downwards through said second air discharge port.

4. A blower type insect pest control apparatus as set forth in claim 3 wherein said first and second air discharge ports are each in the form of a hole that communicates its inner inlet opposed to said fan to its outer outlet open in an outer face of said apparatus casing body and wherein said hole has an upstream side guide face connecting an upstream side inlet hole edge of said inner inlet and an upstream side outlet hole edge of said outer outlet continuously to each other and a downstream side guide face connecting a downstream side inlet hole edge of said inner inlet and a downstream side outlet hole edge of said outer outlet continuously each other, said upstream side and downstream side guide faces being each inclined to a circumferential direction in which said fan rotates.

5. A blower type insect pest control apparatus as set forth in claim 4 wherein:

said apparatus casing body is configured to comprise a base member having said first and second air discharge ports and a fan accommodating chamber, a cover member having said air inlet port and removably attached to said base member at one of its sides in a direction of its thickness and a chemical accommodating chamber disposed between said base and cover members and open to said fan

accommodating chamber;

said base member is formed with a motor accommodating chamber and a battery accommodating chamber which are open in a rear face of said base member at its opposite side to said cover member; and

said motor and battery accommodating chambers are adapted to accommodate the motor and the battery, respectively, and positioned so that the motor and the battery do not overlap in a direction of thickness of said base member.

6. A blower type insect pest control apparatus as set forth in any one of claims 3 to 5 wherein:

said apparatus casing body is further formed with a third air discharge port for discharging air entraining insect pest control component therein, said third air discharge port being in the form of a hole having a radial length and being inclined to a circumferential direction in which the fan rotates whereby when the apparatus is used with the apparatus casing body worn on a user, air is discharged obliquely upwards or obliquely downwards through said third air discharge port.

7. A blower type insect pest control apparatus as set forth in claim 6 wherein said third air discharge port is in the form of a hole that communicates its inner inlet opposed to said fan to its outer outlet open in an outer face of said apparatus casing body and wherein said hole has an upstream side guide face connecting an upstream side inlet hole edge of said inner inlet and an upstream side outlet hole edge of said outer outlet continuously to each other and a downstream side guide face connecting a downstream side inlet hole edge of said inner inlet and a downstream side outlet hole edge of said outer outlet continuously each other, said upstream side and downstream side guide faces being each inclined to a circumferential direction in which said fan rotates.

8. A blower type insect pest control apparatus as set forth in

any one of claims 3 to 7 wherein said apparatus casing body is formed with a subsidiary air discharge port adapted to discharge air laterally when the apparatus is used with the apparatus casing member worn on a user, thereby enabling the apparatus to emit air in all directions with upwards and downwards inclusive.

9. A blower type insect pest control apparatus as set forth in claim 8 wherein said subsidiary air discharge port is larger in air resistance than said first and second air discharge ports or said first, second and third air discharge ports.

10. A blower type insect pest control apparatus as set forth in claim 9 wherein:

said subsidiary air discharge port is in the form of a hole that communicates its inner inlet opposed to said fan to its outer outlet open in an outer face of said apparatus casing body and wherein said hole has an upstream side guide face connecting an upstream side inlet hole edge of said inner inlet and an upstream side outlet hole edge of said outer outlet continuously to each other and a downstream side guide face connecting downstream side inlet hole edge of said inner inlet and a downstream side outlet hole edge of said outer outlet continuously each other, said upstream side and a downstream side guide faces being each inclined to a circumferential direction in which said fan rotates; and

said subsidiary air discharge port is less open in the direction of rotation of the fan than said first and second air discharge ports or said first, second and third air discharge ports.

11. A blower type chemical diffusing apparatus having an air blower and a chemical receptacle stored with a volatile chemical, characterized in that it comprises:

an apparatus casing body wherein air is drawn by the fan through an air inlet port and discharged through an air discharge port while entraining chemical from the chemical receptacle therein;

a power casing body separated from the apparatus casing body

for containing a power supply for the air blower in the apparatus casing body; and

a connection cord for connecting the apparatus casing body and the power casing body to each other and for electrically energizing the air blower in the apparatus casing body from the power supply in the power casing body.

12. A blower type chemical diffusing apparatus as set forth in claim 11 wherein said connection cord can be removably attached to the apparatus casing body and/or the power casing body.

13. A blower type chemical diffusing apparatus as set forth in claim 11 or claim 12 wherein it has a fitting means for fitting the apparatus casing body to an object to be fitted.

14. A blower type chemical diffusing apparatus as set forth in any one of claims 11 to 13 wherein it has a fitting means for fitting the power casing body to an object to be fitted.

15. A blower type chemical diffusing apparatus as set forth in any one of claims 11 to 14 wherein it has a fitting means for fitting the connection cord to an object to be fitted.

16. A chemical cartridge, characterized in that it comprises:

a chemical impregnated body in the form of an air permeable and liquid absorptive sheet impregnated with a chemical;

a retainer receptacle for retaining the chemical impregnated body, the retainer receptacle having a hold section for holding an upper and a lower face of the chemical impregnated body across them and an air passage section through which air flows; and

a space formed between said hold section and chemical impregnated body and opening to an outside through an airflow section formed in the hold section.

17. A chemical cartridge as set forth in claim 16 wherein the

hold section has:

a recess formed where the hold section is contacting a lower face of the chemical impregnated body;

a space formed between the recess and the lower face of the chemical impregnated body; and

an airflow hole formed, where the hold section is contacting an upper face of the chemical impregnated body, so that it is opposed to said recess, thereby providing an air flow section.

18. A chemical cartridge, characterized in that it comprises:

a chemical impregnated body in the form of an air permeable and liquid absorptive sheet impregnated with a chemical; and

a retainer receptacle having a receptacle base member and a cover member for holding said chemical impregnated body wherein:

said receptacle base member comprises a central support section, a peripheral support section and a plurality of intermediate support sections connecting the central support section to the peripheral support section to form an airflow passage section, said receptacle base member being formed with a recess in at least one of upper faces of the central, peripheral and intermediate sections and with a space between this recess and a lower face of the liquid impregnated body,

said cover member comprises a central hold section, a peripheral hold section and a plurality of intermediate hold sections connecting the central hold section and the peripheral hold section to each other to form an airflow passage section, said cover member being formed with an airflow hole in at least one of the central, peripheral and intermediate hold sections so that it is opposed to said recess,

whereby said receptacle base member and cover member can detachably be fitted with and coupled to each other to allow air to flow through the airflow passage section in the receptacle base member and the airflow passage section in the cover member.

19. A chemical cartridge as set forth in claim 18 wherein the

receptacle base member is formed with a recess in the central support section and annular recess in the peripheral support section.

20. A chemical cartridge as set forth in claim 18 or claim 19 wherein the central, peripheral and intermediate support sections are identical in shape and size to the central, peripheral and intermediate hold sections, respectively, so that the airflow passage sections are identical in shape and size to each other.

21. A chemical cartridge, characterized in that it comprises a chemical impregnated body in the form of an air permeable and liquid absorptive sheet impregnated with a chemical and a retainer receptacle for containing the chemical impregnated body wherein the retainer receptacle is formed in a central area thereof with a liquid pool recess such that liquid chemical stored in the liquid pool recess is allowed to permeate towards a peripheral area of the sheet.

22. A chemical cartridge as set forth in claim 21 wherein the retainer receptacle is formed in a peripheral area with a liquid pool recess such that liquid chemical stored in the liquid pool recess is allowed to permeate towards a central area of the sheet.

23. A chemical cartridge as set forth in claim 22 wherein:  
the retainer receptacle for containing the chemical impregnated body comprises a receptacle base member and a cover member;

said receptacle base member comprises a central support section, a peripheral support section and a plurality of connecting sections connecting the central and peripheral support sections to each other to form an airflow passage section;

said cover member comprises a central hold section, a peripheral hold section and a plurality of connecting sections connecting the central and peripheral hold sections to each other to form an airflow passage section;

a central liquid pool recess formed of a recess formed in said

central support section and a supply port formed in said central hold section; and

a peripheral liquid pool recess formed of a peripheral recess formed in said peripheral support section and a peripheral supply section formed in said peripheral hold section.

24. A chemical cartridge characterized in that it comprises:

a chemical impregnated body in the form of a sheet and a retainer receptacle containing the chemical impregnated body wherein:

said chemical impregnated body comprises a carrier in the form of an air permeable and liquid absorptive sheet having a localized high liquid retention region and impregnated with a chemical.

25. A chemical cartridge as set forth in claim 24 wherein a portion of the carrier is made larger in thickness than its remaining portions to constitute the high liquid retention region.

26. A chemical cartridge characterized in that it comprises a chemical impregnated body in the form of a pleated flat sheet material having a large number of pleats impregnated with a chemical, the pleats being formed by alternating mountain fold and valley fold of the sheet material at certain widths, the sheet material itself being air permeable and liquid absorptive, the pleated sheet material having a peripheral area jointed to prevent the pleats from getting out of shape.

27. A chemical cartridge as set forth in claim 26 wherein it further comprises a fixture for holding a peripheral area of the chemical impregnated body.

28. A chemical cartridge as set forth in claim 26 wherein it further comprises a receptacle containing the chemical impregnated body and having an airflow section.

29. A chemical cartridge characterized in that it comprises:



a chemical impregnated body in the form of a pleated flat sheet material having a large number of pleats impregnated with a chemical, the pleats being formed by alternating mountain fold and valley fold of the sheet material at certain widths, the sheet material itself being air permeable and liquid absorptive; and

a fixture for holding a peripheral area of the pleated sheet material with that area squeezed to keep the pleats not getting out of shape.

30. A chemical cartridge characterized in that it comprises:

a chemical impregnated body in the form of a pleated flat sheet material having a large number of pleats impregnated with a chemical, the pleats being formed by alternating mountain fold and valley fold of the sheet material at certain widths, the sheet material itself being air permeable and liquid absorptive; and

a receptacle containing the chemical impregnated body and having an airflow section.

31. A chemical cartridge characterized in that it comprises:

a chemical impregnated body in the form of a pleated flat sheet material having a large number of pleats impregnated with a chemical, the pleats being formed by alternating mountain fold and valley fold of the sheet material at certain widths, the sheet material itself being air permeable and liquid absorptive, the pleated sheet material being deformable into a hollow cylindrical shape; and

a receptacle configured to include an annular hollow and an axial hollow, to allow air to flow through these hollows, and to accept the chemical impregnated body in the annular hollow.

32. A chemical impregnated body characterized in that it comprises:

a honeycomb body having a large number of honeycomb cores open to a pair of opposed side faces thereof in a direction of its thickness and providing airflow passages parallel to the thickness direction; and

a sheet body disposed adjacent to one of said side faces over an entire area thereof wherein

said honeycomb and sheet bodies are impregnated with a chemical.

33. A chemical impregnated body as set forth in claim 32, further comprising a retainer receptacle for retaining therein said honeycomb and sheet bodies and holding them in intimate contact with each other.

34. A chemical impregnated body as set forth in claim 33 wherein said receptacle comprises a receptacle base member having a support section for supporting the sheet body; and a hold member for fitting engagement with the receptacle base member to hold the honeycomb and sheet bodies in intimate contact with each other.

35. A chemical impregnated body as set forth in claim 34 wherein said support section is formed with a liquid chemical pool section and a chemical inlet port for supplying liquid chemical into the liquid chemical pool section.